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(56) Documents cited

GB 1551604

GB 0947991

GB 0953999

(58) Field of search

B6C .

H4J

(54) Telephone apparatus and franking device

(57) There is disclosed a telephone handset which is coupled with a mail franking device and which can be operated in the normal manner of a telephone, but can be converted to operate in a mail franking mode. A slot 11 is provided along which an envelope 20 can be guided in a mail franking mode, and the franking device has keys 12 to 15 which are operable to convert the normal numerical keyboard 30 of the telephone to be used to set postal values. The franking device also blocks incoming telephone calls, and causes automatic printing of required postal values. The postal charge can be stored in the apparatus and then transmitted along a telephone line to the normal telephone meter, or else signals can be transmitted along the telephone line for suitable calculation at the accounting point. A display panel 16 is provided for indicating selected postal values. In one embodiment, the telephone handset and the franking device form a composite installation, whereas in another embodiment the franking device forms an adapter on which the telephone handset can be mounted.

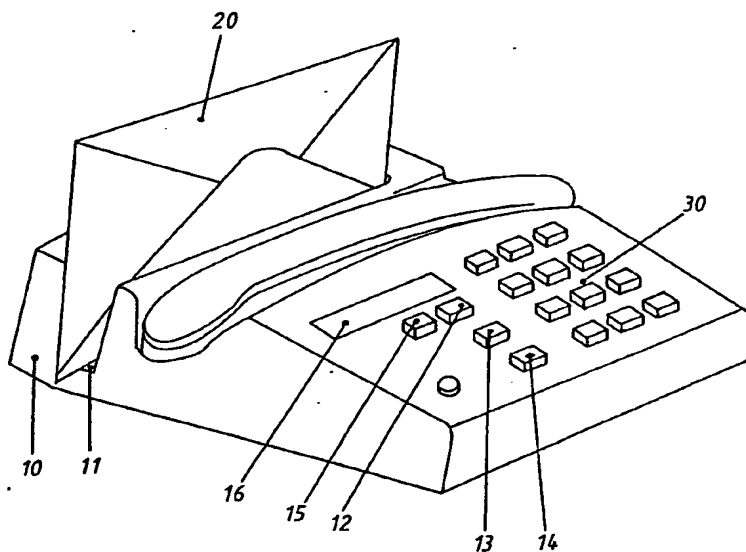


Fig. 1

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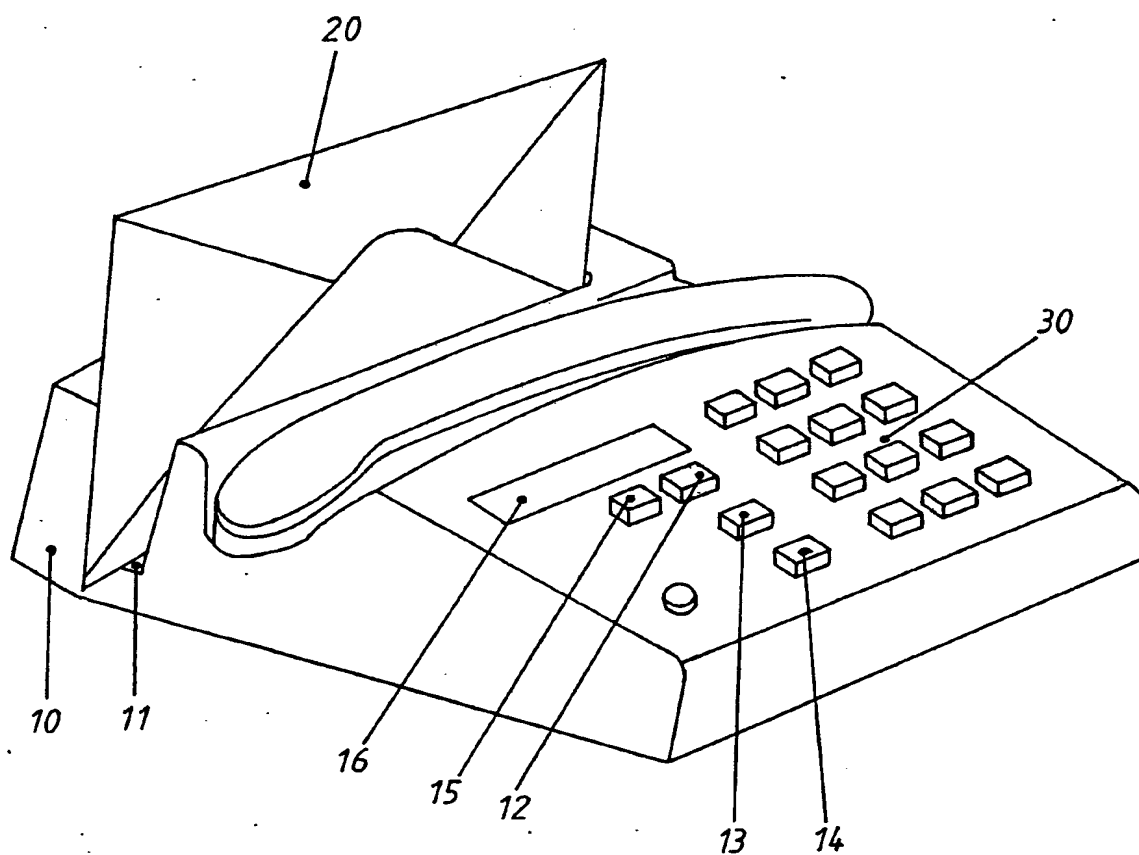


Fig. 1

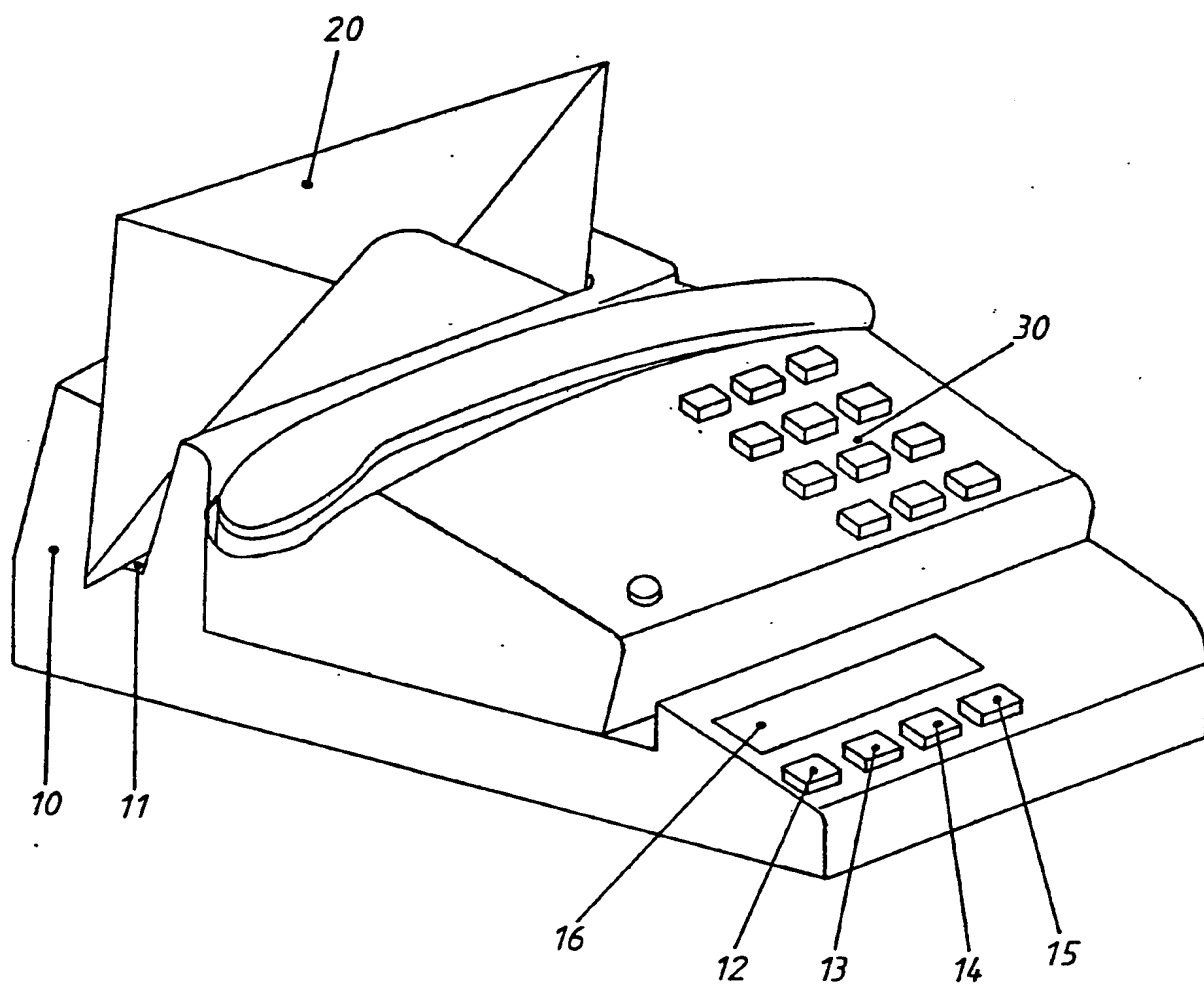


Fig. 2

SPECIFICATION

Process and arrangement for franking machine

- 5 The invention relates to a process and an arrangement for franking mail.

Known franking machines are uneconomical for use with only small amounts of mail. Similarly, hand stamping devices can only be economically used with a relatively large volume of mail. For a small amount of mail, therefore, printed postal value symbols are preferably used.

- 10 From DE-OS 27 01 072 there is known a micro franking device with a microcomputer which is so designated as regards dimensions that it can be held and used by hand and then can be carried off at any time. At a central mail distribution point the micro franking device can be provided with a specific value setting.

- 20 The disadvantage of such franking devices lies in the fact that value cards or postal value symbols have to be obtained at an authorised place and a postage store always has to be refilled.

- The invention has been developed primarily with a view to develop a franking system and a corresponding franking device which ensures a simple value setting and/or postal calculation for a small amount of mail, which is simple to handle, is suitable for a wide distribution of the franking device even in private households, and guarantees a great postable security both for the customer and also for the postal calculation (accounting) point.

- According to one aspect the invention provides telephone apparatus having a mail franking device coupled therewith.

- According to a further aspect the invention provides a method of franking mail using a telephone apparatus having a mail franking device coupled therewith which is operable to convert the telephone apparatus to operate in a mail franking mode, the telephone apparatus being connected by a telephone line to an accounting station for calculating postal value usage when it operates in the franking mode and having a numerical keyboard which is operable to obtain any desired telephone number, the franking device having a control key which is operable to convert the telephone keyboard to be operable to obtain any desired postal value, and a display device being provided for indicating or controlling selected postal values.

The invention will now be described in more detail, by way of example only, with reference to the accompanying drawings in which:

- Figure 1 is a perspective illustration of a telephone apparatus coupled with a mail franking device as an integrated installation; and

Figure 2 is a perspective illustration of an alternative mode of assembly of a franking device and telephone apparatus.

- In both embodiments shown in Figures 1 and 2, like functional elements have like references.

- The franking system is based on the coupling of a franking device to a telephone apparatus or station. Thereby two different calculating (accounting) methods are provided for the postage amounts

used, dependent on the respective preferred method of calculation of any particular postal authority.

- Thus, in one arrangement a value setting by the calculation (accounting) point is possible by means of telephone connection lines, whereby the value is stored by the franking device, and the postage value or balance is internally calculated by means of registers and stores.

- Another solution provides the direct calculation of the postage usage with the accounting point. Thus the postage value is transmitted from the franking device after each value impression directly over the telephone lines to a summation meter at the calculating (accounting) point.

- For both solutions the charge meter of the telephone exchange associated with each telephone subscriber is available. On the part of this charge meter there is possible both a value setting, for example respectively in ten calculating units of the telephone charges, and also registering after a value impression in to smaller charge units. Amounts carried forward or remaining amounts due to the different values of the charge units with respect to the postage amounts are fed into a store of the franking device and calculated with the following value impression.

- The advantage of such a franking system is to be seen in a small expenditure in calculation, its simple obtaining and the postage that is available at any time for the customer. Even when using a special postage meter in a telephone exchange point or in a postage calculation point, the postage calculation can be coupled to the telephone charge calculation.

- Referring now to the drawings, the franking device is either integrated with a telephone station (Fig. 1) or is coupled to a telephone station by means of an adapter connection as an additional attachment device (Fig. 2). The embodiments shown in Figures 1 and 2 only represent examples. Thus the franking device can also be arranged laterally in front of or underneath the telephone station, and in the attachment device the display panel of the telephone station that may exist can be used.

- The franking device 10 has a slot 11 along which is pushed a letter 20 to be franked, or a card or an adhesive postal strip. Practically all letter cover formats can be franked safely and without any problems by means of the projecting head impression (German term *kopfstehend*). The franking device 10 has keys 12 to 15 for the control of different functions. A franking key 12 is used, for the conversion of the telephone station to a mail franking mode. Thus the telephone station is blocked in the outgoing direction but incoming calls can be answered at any time. The conversion by the franking button 12 also causes the conversion of a normal telephone number selection keyboard 30 (or also of a selection disc of the telephone apparatus), which are now used for the franking value input. The postage value fed-in appears on a display panel 16.

- If a wrong value is fed in, then, by refeeding, it can be corrected whereby an internal logic oper-

ates (for example from the fourth fed-in figure to a zero position of the display) so that no additional clearing key can be activated. By means of the command key 13 the required franking impression is triggered and parallel to this the franked value is registered at the calculation point or transmitted to the telephone charge meter or is calculated internally with the value setting. If the desired amounts of frankings are carried out, then a (clearing) key 14 is actuated which resets the devices into their initial positions and hence returns the selection keyboard 30 to telephone selection operation.

If the franking device is available by means of a store for the setting of a value, then a value setting key 15 is necessary. By actuating the franking key 12 and the value setting key 15, a multiple of the telephone charge units is respectively fed-in to the store by means of the pushbutton keyboard panel 30, and the value to be fed-in is displayed on the display panel 16 and by 30. pressing on the command key 13, the storing and the registering at the calculating point that is parallel to this, or the continuous switching of the telephone charge meter is triggered.

25 CLAIMS

1. Telephone apparatus having a mail franking device coupled therewith.
- 30 2. Apparatus according to claim 1, in which the franking device forms an integral part of the telephone apparatus.
3. Apparatus according to claim 1, in which the franking device forms an adapter on which the
- 35 telephone apparatus is mounted.
4. Apparatus according to any one of claims 1 to 3, in which the telephone apparatus comprises a telephone handset having a number keyboard which is operable to obtain any desired telephone number, and said franking device is operable to
- 40 convert the keyboard for operation to obtain any desired postal value.
5. Apparatus according to any one of the preceding claims, in which the franking device includes a slot along which an envelope, card or postal slip is
- 45 movable during a mail franking operation.
6. Apparatus according to any one of the preceding claims, including a display panel for displaying selected postal values.
- 50 7. Apparatus according to claim 6 when appendant to claim 2, in which the telephone apparatus has a display panel which serves to display information relevant to telephone operation of the apparatus, said display panel also serving to display
- 55 selected postal values when the apparatus is operating in a mail franking mode.
8. Apparatus according to any one of the preceding claims, in which the franking device has control keys which are operable to convert the telephone
- 60 apparatus to operate in a mail franking mode, to block outgoing telephone connections but to allow incoming telephone connections, to trigger printing of a selected postal value and to request pre-setting of the postal value.
- 65 9. A method of franking mail using a telephone

apparatus having a mail which is operable to convert the telephone apparatus to operate in a mail franking mode, the telephone apparatus being connected by a telephone line to an accounting station for calculating postal value usage when it operates in the franking mode and having a numerical keyboard which is operable to obtain any desired telephone number, the franking device having a control key which is operable to convert the telephone keyboard to be operable to obtain any desired postal value, and a display device being provided for indicating or controlling selected postal values.

10. A method according to claim 9, in which, at the request of the user, by means of the telephone lines, charge values are pre-set by the accounting station, are stored in the franking device and each franking value used is subtracted from the stored value.

85 11. A method according to claim 9, in which the franking values used are directly transmitted to a summation meter at the accounting station after printing of each postal value by the franking device.

90 12. A method according to claim 9 or 10, in which the franking values used are registered and calculated by the telephone charge meter.

13. A method according to any one of claims 9, 10 or 12, in which a postal value pre-setting is stored in the franking device as a multiple of a telephone charge.

14. A method according to claim 13, in which the remaining amounts are kept in a store and are added to the next value pre-setting.

100 15. A method according to any one of claims 9 to 14, in which the calculation of the postal charges is coupled to the telephone calculation.

16. Apparatus according to claim 1 and substantially as hereinbefore described with reference to, and as shown in Figure 1 or Figure 2 of the accompanying drawings.

17. A method according to claim 9 and substantially as hereinbefore described with reference to, and as shown in Figure 1 or 2 of the accompanying drawings.

